

This listing of claims will replace all prior versions and listings of claims in the application:

Listing of Claims:

1. (Original) A spot drilling insert comprising:
an insert body supporting a drill point for rotation in a cutting direction about a rotational axis, said drill point comprising:
a chisel edge supported by the drill point, said chisel edge having diametrically opposite ends;
a pair of linear cutting edges, each cutting edge extending from one end of the chisel edge and inclined at an angle relative to said rotational axis, said cutting edge formed at an intersection of a substantially planar first flute surface and a substantially conical land surface, said land surface having an axis of curvature offset relative to said rotational axis,
wherein said chisel edge and cutting edges are centered on said rotational axis and each said land surface radially approaches said axis of rotation in a direction opposite said cutting direction.
2. (Original) The spot drilling insert of claim 1, wherein said cutting edges define an included angle of less than 80°.
3. (Original) The spot drilling insert of claim 1, wherein said cutting edges define an included angle of approximately 60°.
4. (Original) The spot drilling insert of claim 1, wherein said drill point defines a flute between said substantially planar first flute surface and a substantially planar second flute surface.

5. (Original) A spot drilling tool comprising:
a drill holder having an axis defining shank with a forward end defining an insert receiving socket; and
a spot drilling insert comprising:
an insert body having a socket-mating portion complementary in configuration to said socket; and
a drill point integrally extending from an end of said insert body axially opposed to said socket mating portion, said drill point including a pair of substantially linear cutting edges inclined rearwardly from a chisel edge at the extreme forward end of said insert, each said cutting edge defined by an intersection of a substantially planar flute surface and a substantially conical land surface,
wherein when said insert is received in said socket, said socket mating portion mates with said socket to position said cutting edges and chisel edge forwardly of said socket at a pre-determined position centered on the axis of said shank.
6. (Original) The spot drilling tool of claim 5, wherein said substantially conical land surface has an axis of curvature that is offset from the axis of said shank.
7. (Original) The spot drilling tool of claim 5, wherein said cutting edges define an included angle of less than 80°.
8. (Original) The spot drilling tool of claim 5, wherein said cutting edges define an included angle of approximately 60°.
9. (Original) The spot drilling tool of claim 5, wherein said drill point includes two linear V-shaped flutes defined by said substantially planar flute surface and a second substantially planar flute surface meeting at a radius, said flutes being diagonally

opposed and diametrically offset in a plane orthogonal to the drill point and separated by a tapered web which supports said chisel edge.

10. (Cancelled) A method for manufacturing a spot drilling insert from a calibrated rectangular slab of carbide having a longitudinal rotational axis, opposed major sides, opposed minor sides and opposed bottom and top ends, said method comprising the steps of:

grinding first and second substantially identical linear flutes originating in said major sides and extending off said top end, each said flute defined by two substantially planar flute surfaces meeting at a radius, said flutes being diagonally opposed and diametrically offset to define a tapered web of insert material that is thinnest at said top end; and

grinding first and second substantially identical conical land surfaces, a cutting edge defined by the intersection of said conical land surface with one of said planar flute surfaces, said cutting edges being substantially identically positioned relative to said rotational axis, each said conical land surface having a center of curvature offset from said rotational axis.

11. (Cancelled) The method of claim 10, comprising the step of:

applying a hard coating to said slab prior to said step of grinding first and second substantially identical land surfaces.

12. (Cancelled) The method of claim 11, wherein said step of applying comprises:

applying a hard coating selected from titanium nitride (TiN) and titanium aluminum nitride (TiAlN).

13. (previously presented) A spot drilling insert comprising:
an insert body having a first end and a second end supporting a drill point for rotation in a cutting direction about a rotational axis, said drill point comprising:
two diametrically opposed substantially conical land surfaces extending rearwardly and outwardly from a tip of said drill point, each said land surface having an axis of curvature offset relative to said rotational axis, each said land surface radially approaching said axis of rotation in a direction opposite said cutting direction;
two diametrically opposed flutes, each said flute defining a linear trough and comprising a substantially planar first flute surface intersecting one of said land surfaces to form a cutting edge, said linear troughs arranged to converge as they approach said tip and angularly overlap behind said tip.
14. (previously presented) The spot drilling insert of claim 13, wherein said linear troughs are not parallel to said cutting edges.
15. (previously presented) The spot drilling insert of claim 13, wherein each said flute comprises a substantially planar second flute surface meeting said substantially planar first flute surface at a radius to form an obtuse angle.
16. (previously presented) The spot drilling insert of claim 13, wherein said tip defines a chisel edge extending between said cutting edges.
17. (previously presented) The spot drilling insert of claim 13, wherein said tip has a diameter and the axis of curvature of said land surfaces is offset from said rotational axis a distance equal to approximately 10% of said diameter.
18. (previously presented) The spot drilling insert of claim 13, wherein said cutting edges form an included angle of approximately 60°.

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19. (previously presented) The spot drilling insert of claim 13, wherein said first flute surfaces are not parallel to a center plane of said insert body and said linear troughs are not parallel to said cutting edges.